

ABSTRACT OF THE DISCLOSURE

A hand-held automatic refractometer comprises a linear scanned array having a plurality of photoelectric cells and an optical system for directing light onto the array, the particular photoelectric cells of the array which are illuminated by said light being determined by the index of refraction of a sample substance placed on a sample surface of a prism of the optical system. A reflective surface is arranged close to the array at an acute angle thereto for directing primary light from the sample-prism boundary to the array, and for redirecting stray reflected light from the array back onto the array. The disclosed refractometer has a compact design wherein the linear array extends in a direction substantially parallel to the prism sample surface. The prism is mounted in a housing and the sample surface faces upward to allow access through a sample well of the housing, while the array is mounted in the housing facing in a downward direction.